

In the Claims:

1       1. (currently amended) Procedure to increase the manipulation  
2        security for a bi-directional contactless data transmission  
3        by means of a first transmission and receiver unit (BA) and  
4        a second transmission and receiver unit (TR)  
5        ● wherein  
6        ● the second transmission and receiver unit (TR), on  
7        receipt of a transmitted electromagnetic signal  
8        (fULmod) from the first transmission and receiver unit  
9        (BA), will convert this signal, with regard relative  
10      to at least one selected physical quantity that  
11      characterizes the signal, into a response signal  
12      (f'DLmod) and re-transmit the same response signal to  
13      the first transmission and receiver unit (BA), and  
14      ● on receipt of the response signal (f"DLmod), the first  
15      transmission and receiver unit (BA) will convert this  
16      response signal with regard to the selected physical  
17      quantity thereof into a test signal (f"UL) such that  
18      this will compensate the conversion effected in the  
19      second transmission and receiver unit (TR), and  
20      ● finally, in the first transmission and receiver unit  
21      (BA) a comparison between the test signal (f"UL) and  
22      the transmitted electromagnetic signal (fUL) is  
23      effected, and  
24      ● as a result (CF) of this comparison a value is  
25      assigned to a manipulation indication.

1       2. (original) Procedure according to Claim 1 wherein it is  
2       investigated for the comparison within a time period t,  
3       whether there is a fixed relationship with regard to the  
4       selected physical quantity.

1       3. (original) Procedure according to Claim 1 wherein, if the  
2       result (CF) of the comparison is below a selected limit  
3       value, the manipulation indication is assigned the value 0.

1       4. (currently amended) Procedure according to Claim 1 wherein  
2       this comparison (SP) will ~~preferably~~ be completed within a  
3       period t1 of 300ms max. following the transmission of the  
4       original transmitted electromagnetic signal (fULmod).

1       5. (original) Procedure according to Claim 1 wherein as a  
2       physical quantity for the comparison (SP) the phase,  
3       amplitude, or frequency of the test signal is used.

1       6. (original) Procedure according to Claim 1 wherein data  
2       information is modulated onto the electromagnetic signal  
3       (FUL, f'DL) by means of frequency or amplitude modulation.

1       7. (original) Procedure according to Claim 1 wherein the  
2       comparison (SP) is effected only by means of the frequency  
3       of the electromagnetic signal (f"UL, fUL).

1       8. (original) Procedure according to Claim 1 wherein, in the  
2       second transmission and receiver unit (TR), the frequency

3       of the received electromagnetic signal ( $f'UL$ ) is multiplied  
4       with a number ( $Z$ ), and, in the first transmission and  
5       receiver unit (BA), the frequency of the received  
6       electromagnetic signal ( $f"DL$ ) is divided by this  
7       number ( $Z$ ).

1       9. (original) Procedure according to Claim 8 wherein the  
2       multiplication and division is effected by means of a ratio  
3       made up of two natural numbers.

1       10. (previously presented) Procedure according to Claim 7  
2       wherein, if the result (CF) of the frequency comparison is  
3       below a selected limit value, the manipulation indication  
4       is assigned the value 0.

1       11. (previously presented) Procedure according to Claim 8  
2       wherein, if the result (CF) of the frequency comparison is  
3       below a selected limit value, the manipulation indication  
4       is assigned the value 0.

1       12. (new) A method of carrying out a bi-directional contactless  
2       data transmission with increased security between a first  
3       unit and a second unit, comprising the steps:

- 4       a) emitting from said first unit a forward signal having  
5       an original value of a characteristic physical  
6       parameter selected from the group consisting of a  
7       frequency, a phase, and an amplitude;
- 8       b) receiving said forward signal in said second unit;

9           c) determining a received value of said characteristic  
10           physical parameter of said forward signal as received  
11           in said second unit;  
12           d) modifying said received value of said characteristic  
13           physical parameter according to a defined first  
14           modification to produce a modified value of said  
15           characteristic physical parameter;  
16           e) generating and emitting from said second unit a  
17           response signal having said modified value of said  
18           characteristic physical parameter;  
19           f) receiving said response signal in said first unit;  
20           g) determining a returned value of said characteristic  
21           physical parameter of said response signal as received  
22           in said first unit;  
23           h) modifying said returned value of said characteristic  
24           physical parameter according to a defined second  
25           modification to produce a resultant value of said  
26           characteristic physical parameter;  
27           i) comparing said resultant value to said original value  
28           of said characteristic physical parameter to determine  
29           a difference therebetween; and  
30           j) responsive to and dependent on said difference,  
31           determining whether to block the data transmission  
32           between said first and second units.

1        13. (new) The method according to claim 12, wherein said  
2           characteristic physical parameter is said frequency.

1       **14.** (new) The method according to claim 13, wherein said  
2        difference between said resultant value and said original  
3        value of said frequency is detected down to a frequency  
4        difference of 1 ppm.

1       **15.** (new) The method according to claim 12, wherein said  
2        characteristic physical parameter is said phase.

1       **16.** (new) The method according to claim 12, wherein said  
2        characteristic physical parameter is said amplitude.

1       **17.** (new) The method according to claim 12, wherein said second  
2        modification reverses said first modification.

1       **18.** (new) The method according to claim 17, wherein said first  
2        modification comprises multiplication, and said second  
3        modification comprises division.

1       **19.** (new) The method according to claim 12, wherein said first  
2        modification consists of multiplication by a factor, said  
3        second modification consists of division by said factor,  
4        said step of modifying said received value consists of  
5        multiplying said received value by said factor, and said  
6        step of modifying said returned value consists of dividing  
7        said returned value by said factor.

1       **20.** (new) The method according to claim 12, wherein said step  
2        of comparing said resultant value to said original value

3           comprises generating a test signal having said resultant  
4           value of said characteristic physical parameter, and  
5           comparing said test signal to said forward signal with  
6           respect to said characteristic physical parameter.

1       **21.** (new) The method according to claim 12, wherein said  
2           determining whether to block the data transmission  
3           comprises blocking the data transmission if said difference  
4           exceeds a predetermined threshold.

1       **22.** (new) The method according to claim 12, further comprising,  
2           in parallel or series with said steps a) to j), additional  
3           steps of transmitting an authorization code from said  
4           second unit to said first unit, and comparing said  
5           authorization code with a validation code in said first  
6           unit to determine whether to permit the data transmission  
7           between said first and second units.

[RESPONSE CONTINUES ON NEXT PAGE]